

IN THE CLAIMS

1. (currently amended) A transmission power control method that compares error rate of receive data and target error rate on a receiving side, controls target SIR by a result of the comparison, and causes a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR for each slot that constitutes a frame of a dedicated physical channel, comprising the steps of:

    determining whether an interval slot is an interval slot in which data is being transmitted by a data channel;

    comparing the error rate of receive data after decoding and the target error rate of the data and controlling the target SIR by a result of the comparing in the interval slot in which data is being transmitted by the data channel;

    measuring the error rate of a demodulated receive pilot in an interval slot in which data is not being transmitted and a pilot is being transmitted by a control channel; and

    controlling the target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot in the interval slot in which data is not being transmitted and a pilot is being transmitted by the control channel.

2. (original) The method according to claim 1, wherein the error rate of a synchronous word contained in a pilot is adopted as the error rate of the pilot.

3. (currently amended) The method according to claim 1, further comprising a step of determining whether an interval slot is an interval slot in which data is being transmitted based upon results obtained by decoding demodulated TFCI information.

4. (currently amended) The method according to claim 1, further comprising a step of determining whether ~~an interval slot~~ is ~~an interval slot~~ in which data is being transmitted based upon TFCI information that has been demodulated by a modem.

5. (previously presented) The method according to claim 1, further comprising a step of setting the target error rate of the pilot in such a manner that the transmitting and receiving sides will not become desynchronized when the target SIR has been lowered upon comparing the measured error rate of the pilot and the target error rate of the pilot.

6. (original) The method according to claim 5, further comprising a step of providing upper and lower limits of the target error rate of the pilot and controlling the target SIR in such a manner that the measured error rate of the pilot will fall within a range defined by said upper and lower limits.

7. (currently amended) The method according to claim 1, further comprising a step of storing target SIR in control before a changeover is made from the control in the ~~interval slot~~ in which data is being transmitted to the control in the ~~interval slot~~ in which data is not being transmitted.

8. (currently amended) The method according to claim 7, further comprising a step of storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the ~~interval slot~~ in which data is not being transmitted.

9. (currently amended) The method according to claim 7, further comprising a step of storing the difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR, after the changeover is made to the control in the interval\_slot in which data is not being transmitted.

10. (currently amended) The method according to claim 7, further comprising a step of setting the stored SIR as target SIR when a changeover is made from the control in the interval\_slot in which data is not being transmitted to the control in the interval\_slot in which data is being transmitted.

11. (currently amended) The method according to claim 8, wherein when the change is made from the control in the interval\_slot in which data is not being transmitted to the control in the interval\_slot in which data is being transmitted, a value obtained by adding the absolute value of the difference between the two stored target SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control is set as the target SIR.

12. (withdrawn) A control method that controls a transmitter so as to make a measured reception quality approach a target quality, wherein if a data signal is not contained in a prescribed receive interval and a pilot signal is contained in said interval based upon format information of a received receive signal, the target quality is controlled based upon the pilot signal, and if a data signal is contained in the prescribed receive interval, the target quality is controlled based upon the data signal.

13. (currently amended) A transmission power control apparatus that compares error rate of receive data and target error rate on a receiving side, controls target SIR by a result of the comparison, and causes a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR for each slot that constitutes a frame of a dedicated physical channel, comprising:

- a modem for demodulating a receive signal;
- a data existence determination unit for determining whether an interval slot is an interval slot in which data is being transmitted by a data channel;
- a decoder for decoding the receive data;
- a first target-SIR controller for comparing the error rate of receive data after decoding and the target error rate of the data and controlling the target SIR by the result of the comparison in the interval slot in which data is being transmitted by the data channel; and
- a second target-SIR controller for measuring the error rate of a receive pilot in a slot, which has been demodulated by said modem, comparing the measured error rate of the pilot and target error rate of the pilot and controlling the target SIR by the result of the comparison in an interval~~the slot~~ in which data is not being transmitted and a pilot is being transmitted by a control channel.

14. (original) The apparatus according to claim 13, wherein said second target-SIR controller adopts the error rate of a synchronous word contained in a pilot as the error rate of the pilot.

15. (currently amended) The apparatus according to claim 13, wherein said data existence determination unit determines whether an interval slot is an interval slot in which

data is being transmitted based upon results obtained by decoding demodulated TFCI information.

16. (currently amended) The apparatus according to claim 13, wherein said data existence determination unit determines whether ~~an interval slot~~ is ~~an interval slot~~ in which data is being transmitted based upon TFCI information that has been demodulated by said modem.

17. (previously presented) The apparatus according to claim 13, wherein said second target-SIR controller sets the target error rate of the pilot in such a manner that the transmitting and receiving sides will not become desynchronized when said second target-SIR controller has lowered the target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot.

18. (original) The apparatus according to claim 13, wherein said second target-SIR controller provides upper and lower limits of the target error rate of the pilot and controls the target SIR in such a manner that the measured error rate of the pilot will fall within a range defined by said upper and lower limits.

19. (currently amended) The apparatus according to claim 13, further comprising storage means for storing target SIR that prevails before a changeover is made from the control in the ~~interval slot~~ in which data is being transmitted to the control in the ~~interval slot~~ in which data is not being transmitted.

20. (currently amended) The apparatus according to claim 13, further comprising storage means for storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the interval-slot in which data is not being transmitted.

21. (currently amended) The apparatus according to claim 19, wherein the difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR is stored after the changeover is made to the control in the interval-slot in which data is not being transmitted.

22. (currently amended) The apparatus according to claim 19, wherein said second target-SIR controller sets the stored SIR as target SIR when a changeover is made from the control in the interval-slot in which data is not being transmitted to the control in the interval-slot in which data is being transmitted.

23. (currently amended) The apparatus according to claim 20, wherein when the change is made from the control in the interval-slot in which data is not being transmitted to the control in the interval-slot in which data is being transmitted, said second target-SIR controller sets, as the target SIR, a value obtained by adding the absolute value of the difference between the two stored target SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control.

24. (withdrawn) A receiving apparatus for controlling a transmitter so as to make a measured reception quality approach a target quality, comprising:

an extraction unit for extracting format information of a received receive signal; and  
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a controller for controlling the target quality based upon a pilot signal if a data signal is not contained in a prescribed receive interval and the pilot signal is contained in said interval based upon format information of a received receive signal, and controlling the target quality based upon a data signal if the data signal is contained in the prescribed receive interval.

25. (withdrawn) A radio communication apparatus configured to receive a data channel and a control channel, in which the apparatus compares an error rate of receive data and a target error rate, controls a target receiving quality based upon a result of the comparison and causes a transmission apparatus to control transmission power in such a manner that a measured receiving quality agrees with the target receiving quality, said radio communication apparatus comprising:

a unit configured to switch transmission power control between a first transmission power control on a basis of quality measured for the data channel and a second transmission power control on a basis of quality measured for the control channel, wherein

the first transmission power control is executed by first comparing the error rate of receive data in the data channel and the target error rate and controlling the target receiving quality based upon the result of the first comparison, and

the second transmission power control is executed by second comparing the error rate of a receive pilot in the control channel and the target error rate of the pilot and controlling the target receiving quality based upon the result of the second comparison.

26. (withdrawn) The radio communication apparatus of claim 25, wherein the first transmission power control and the second transmission power control is to control a target receiving quality compared with a measured reception quality.

27. (withdrawn) The radio communication apparatus of claim 25, wherein the unit performs the switching based on a signal which indicates a structure of receiving a radio frame.

28. (withdrawn) The radio communication apparatus of claim 25, wherein the second transmission power control is performed based on a known signal transmitted via the control channel.

29. (withdrawn) The radio communication apparatus of the claim 25, wherein the first transmission power control is performed based on error condition of the data channel and the second transmission power control is performed based on error condition of the control channel.